



# SEQUENCE LISTING

<110> Ellington, Andrew  
Hesselberth, Jay  
Marshall, Kris  
Robertson, Michael  
Sooter, Letha  
Davidson, Eric  
Cox, J. Colin  
Reidel, Timothy

<120> Regulatable, Catalytically Active Nucleic Acids

<130> TEXAS-11147

<140> 09/883,119

<141> 2001-06-14

<160> 67

<170> PatentIn version 3.3

<210> 1

<211> 129

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 1

taatcttacc ccggaattat atccagctgc atgtcaccat gcagagcaga ctatatctcc 60

aacttggttaa agcaagttgt ctatcgtttc gagtcacttg accctactcc ccaaagggat 120

agtcgtag 129

<210> 2

<211> 131

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2

gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60

caatcccgtg ctaaattata ccagcatcgt cttgatgccc ttggcagata aatgcctaac 120

gactatccct t 131

<210> 3  
 <211> 75  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 3  
 gataatacga ctactatag ggatcaacgc tcagtagatg ttttcttggg ttaattgagg 60  
 cctgagtata aggtg 75  
  
 <210> 4  
 <211> 89  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 4  
 cttagctaca atatgaacta acgtagcata tgacgcaata ttaaacggta gcattatggt 60  
 cagataaggt cgttaatctt accccggaa 89  
  
 <210> 5  
 <211> 131  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <220>  
 <221> misc\_feature  
 <222> (77)..(77)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (108)..(108)  
 <223> n is a, c, g, or t  
  
 <400> 5  
 gcctgagtat aaggtgactt atactagtaa tctatctaaa cggggaacct ctctagtaga 60  
 caatcccggtg ctaaataata ccagcatcgt cttgatgccc ttggcagnta aatgcctaac 120  
 gactatccct t 131

<210> 6  
 <211> 101  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 6  
 cttagctaca atatgaacta acgtagcata tgacgcaata ttaaacggta gtattatggt 60  
 cagataaggt cgttaatctt accccggaat tctatccagc t 101  
  
 <210> 7  
 <211> 116  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <220>  
 <221> misc\_feature  
 <222> (37)..(86)  
 <223> n is a, c, g, or t  
  
 <400> 7  
 ttctaatacg actcactata ggacctcggc gaaagcnnnn nnnnnnnnnn nnnnnnnnnn 60  
 nnnnnnnnnn nnnnnnnnnn nnnnnngagg ttaggtgcct cgtgatgtcc agtcgc 116  
  
 <210> 8  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 8  
 ttctaatacg actcactata 20  
  
 <210> 9  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 9  
 gcgactggac atcacgag 18

<210> 10  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 10  
 ttctaatacgc actcactata ggacctcggc gaaagc 36  
  
  
 <210> 11  
 <211> 80  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 11  
 gggaauggau ccacaucuac gaauucgagu cgagaacugg ugcgaaugcg aguaaguuca 60  
 cuccagacuu gacgaagcuu 80  
  
  
 <210> 12  
 <211> 82  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 12  
 gggaauggau ccacaucuac gaauucguag cguagaguau gagagagcca aggucagguu 60  
 cacuccagac uugacgaagc uu 82  
  
  
 <210> 13  
 <211> 80  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 13  
 gggaauggau ccacaucuac gaauucauca gggcuaaaga gugcagaguu acuuaguuca 60  
 cuccagacuu gacgaagcuu 80

<210> 14  
 <211> 211  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 14  
 gacuaauaug auuuggucuc auuaaagauc acaaaauugcu ggaaacuccu uugagggcuag 60  
 gacaaucagc aaggaaguua acauauaauug uuaaaaccuu cagagacuag acgugaucau 120  
 uuaauagacg ccuugcggcg cuuauuagau aagguauagu ccaaauuugu auguaauac 180  
 aaaaugauaa aaaaaaauga aaucauaugg g 211  
  
 <210> 15  
 <211> 80  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <220>  
 <221> misc\_feature  
 <222> (27)..(56)  
 <223> n is a, c, g, t or u  
  
 <400> 15  
 gggaauggau ccacaucuac gaauucnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnuuca 60  
 cuccagacuu gacgaagcuu 80  
  
 <210> 16  
 <211> 122  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 16  
 gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
 caatcccgtg ctaaattgta ggactgcccg ggttctacat aaatgcctaa cgactatccc 120  
 tt 122

<210>	17	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	17	
	ttatactagt aatctatcta aacg	24
<210>	18	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	18	
	cccggaattc tatccagctg catg	24
<210>	19	
<211>	94	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	19	
	gcctgagtat aagggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga	60
	caatcccgtg ctaaatgcct aacgactatc cctt	94
<210>	20	
<211>	131	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	20	
	gcctgagtat aagggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga	60
	caatcccgtg ctaaattata ccagcatcgt cttgatgccc ttggcagata aatgcctaac	120
	gactatccct t	131

<210> 21  
 <211> 133  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 21  
 gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
 caatcccgtg ctaaattgat accagcatcg tcttgatgcc cttggcagca taaatgccta 120  
 acgactatcc ctt 133  
  
 <210> 22  
 <211> 119  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 22  
 gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
 caatcccgtg cataccagca tcgtcttgat gcccttggca ggccctaacga ctatccctt 119  
  
 <210> 23  
 <211> 129  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 23  
 gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
 caatcccgtg ctaaataaac cagcatcgtc ttgatgccct tggcagtaaa tgccctaacga 120  
 ctatccctt 129

<210> 24  
<211> 115  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 24  
gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
caatcccgta taccagcatc gtcttgatgc ccttggcagc taacgactat ccctt 115

<210> 25  
<211> 117  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 25  
gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
caatcccgta ataccagcat cgtcttgatg cccttggcag cctaacgact atccctt 117

<210> 26  
<211> 144  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 26  
tgagtataag gtgacttata ctagtaatct atctaaacgg ggaacctcta taccagcatc 60  
gtcttgatgc ccttggcaga gacaatcccg tgctaaattg taggactgcc cgggttctac 120  
ataaatgcct aacgactatc cctt 144

<210> 27  
<211> 140  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic



<400> 27  
 tgagtataag gtgacttata ctagtaatct atctaaacgg ggaacctata ccagcatcgt 60  
 cttgatgccc ttggcagaca atcccgtgct aaattgtagg actgcccggg ttctacataa 120  
 atgcctaacg actatccctt 140

<210> 28  
 <211> 107  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 28  
 gtaatctatc taaacgggga acctctctag tagacaatcc cgtgctaaat tgataccagc 60  
 atcgtcttga tgccattggc agcataaatg cctaacgact atccctt 107

<210> 29  
 <211> 107  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 29  
 gtaatctatc taaacgggga acctctctag tagacaatcc cgtgctaaat tgataccagc 60  
 atcgtcttga tgcccttggt tgcataaatg cctaacgact atccctt 107

<210> 30  
 <211> 122  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 30  
 gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
 caatcccgtg ctaaattagg atatgcttcg gcagaaggat aaatgcctaa cgactatccc 120  
 tt 122

<210> 31  
 <211> 124  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 31  
 gcctgagtat aaggtgactt atacttgtaa tctatctaaa cggggaacct ctctagtaga 60  
 caatcccgtg ctaaattgag gatatgcttc ggcagaaggc ataaatgcct aacgactatc 120  
 cctt 124  
  
 <210> 32  
 <211> 37  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 32  
 gataatacga ctactataa tggcattacc gccttgt 37  
  
 <210> 33  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 33  
 gctctagact tagctacaat atgaac 26  
  
 <210> 34  
 <211> 28  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 34  
 aaaaaaaaaa aaaaaaaaaa aaugcacu 28

<210> 35  
<211> 61  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<220>  
<221> misc\_feature  
<222> (37)..(47)  
<223> n is a, c, g, or t

<400> 35  
cggaagcaag gagagacgtc cttggaggag caagggnnnn nnnnnnngtc ttacagtcag 60  
t 61

<210> 36  
<211> 54  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<220>  
<221> misc\_feature  
<222> (14)..(17)  
<223> n is a, c, g, or t

<400> 36  
cagagcatta aggnnnnacg ggtgactott tagttaggct cccgtagtt tagg 54

<210> 37  
<211> 55  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<220>  
<221> misc\_feature  
<222> (39)..(43)  
<223> n is a, c, g, or t

<400> 37  
cagagcatga agcggccacg ggtgggatgt tgcccttgnn nnngtcagtc tygcg 55

<210> 38  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 38  
 aggaaccccc agattgtgtc gggctgttat gcgctgttta ttgagattac 50  
  
 <210> 39  
 <211> 49  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 39  
 cagtacgtta atatcccgga gctaggtgct tcttgtggac agttatggg 49  
  
 <210> 40  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 40  
 gcacacagca ctatattgct tggctcggagc gtttcgttta ttgagtttac 50  
  
 <210> 41  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <220>  
 <221> misc\_feature  
 <222> (28)..(28)  
 <223> n is a, c, g, or t  
  
 <400> 41  
 taacgtctca tggctaaatt gccatgtntg ctacaaatga tatgactaga 50

<210> 42  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 42  
 taacgaagac tttggtgacc ggctagtctt ctattaatga gatgacgaga 50  
  
 <210> 43  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <220>  
 <221> misc\_feature  
 <222> (31)..(31)  
 <223> n is a, c, g, or t  
  
 <400> 43  
 taactccgc acttaggaac ggtgctgga ntaaaaatga tatgacgaga 50  
  
 <210> 44  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <220>  
 <221> misc\_feature  
 <222> (32)..(32)  
 <223> n is a, c, g, or t  
  
 <400> 44  
 tttaaaacga gagaattggc agtaccgtgc tnggttccga gataacgaga 50

<210> 45  
 <211> 270  
 <212> RNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 45  
 uuggguuaau ugaggccuga guauaaggug acuuauacuu gaaucuauc uaaacgggga 60  
 accucucuag uagacaaucc cgugcuaaa uguaggacug gddcbacaua aaugccuaac 120  
 gacuaucuu uugggggagua gggucaagug acucgaaacg auagacaacu ugcuuuaaga 180  
 aguuggagau auagucugcu cugcauggug acaugcagcu ggauauaaau ccgggguaag 240  
 auuaacgacc uuaucugaac auaaugcuac 270

<210> 46  
 <211> 82  
 <212> RNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 46  
 uaaacgggga accucucuag uagacaaucc cgugcuaaa uauaccagca ugcucuugau 60  
 gcccuuggca gauaaaugcc ua 82

<210> 47  
 <211> 84  
 <212> RNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 47  
 uaaacgggga accucucuag uagacaaucc cgugcuaaa ugauaccagc aucgucuuga 60  
 ugcccuuggc agcauaaaug ccua 84

<210> 48  
 <211> 40  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 48  
 uaaacgggga accucucuag uagacaaucc cgugcuaaaau 40  
  
 <210> 49  
 <211> 30  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 49  
 auaccagcau cgucuucaug cccuuggcag 30  
  
 <210> 50  
 <211> 10  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 50  
 uaaaugccua 10  
  
 <210> 51  
 <211> 130  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 51  
 ggacuucggg ccagugcucg ugcacuaggc cguucgacca uguggguccg cugccagcgg 60  
 caaucuggca ugcuaugcgg aaccuucaca ucuuagacag gagguuaggu gccucgugau 120  
 guccagucgc 130

<210>	52	
<211>	16	
<212>	RNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	52	
	ggaccucggc gaaagc	16
<210>	53	
<211>	30	
<212>	RNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	53	
	gagguuaggu gccucgugau guccagucgc	30
<210>	54	
<211>	96	
<212>	RNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	54	
	ggaccucggc gaaagccgga agcaaggaga gacguccuug gaggagcaag gggucuuaca	60
	gucagugagg uuaggugccu cgugaugucc agucgc	96
<210>	55	
<211>	73	
<212>	RNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	55	
	uaaacgggga accucucuag uagacaaucc cgugcuaaa uaggauaugc uucugcagaa	60
	ggauaaaugc cua	73



<210> 56  
 <211> 75  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 56  
 uaaacgggga accucucuag uagacaaucc cgugcuaaaau ugaggauaug cuucugcaga 60  
 aggcauaaaau gccua 75  
  
 <210> 57  
 <211> 45  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 57  
 uaaacgggga accucucuag uagacaaucc cgugcuaaaau gccua 45  
  
 <210> 58  
 <211> 84  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 58  
 uaaacgggga accucucuag uagacaaucc cgugcuaaaau ugauaccagc aucgucuuga 60  
 ugcccuuggc agcauaaaug ccua 84  
  
 <210> 59  
 <211> 70  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 59  
 uaaacgggga accucucuag uagacaaucc cgugcauacc agcaucgucu ugaugcccuu 60  
 ggcaggccua 70

<210> 60  
 <211> 80  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 60  
 uaaacgggga accucucuag uagacaaucc cgugcuaaaau auaccagcau cgucuucaug 60  
 cccuuggcag uaaaugccua 80  
  
 <210> 61  
 <211> 66  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 61  
 uaaacgggga accucucuag uagacaaucc cgauuaccag caucgucuug augcccuugg 60  
 cagcua 66  
  
 <210> 62  
 <211> 68  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 62  
 uaaacgggga accucucuag uagacaaucc cgugauacca gcaucgucuu gaugcccuug 60  
 gcagccua 68  
  
 <210> 63  
 <211> 98  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 63  
 uaaacgggga accucuaauac cagcaucguc uugaugcccu uggcagagac aaucggguc 60  
 uaaauuguag gacugcccgg guucuacaua aaugccua 98

<210> 64  
 <211> 94  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 64  
 uaaacgggga accuauacca gcaucgucuu gaugcccuug gcagacaauc ccgugcuaaa 60  
 uuguaggacu gcccggguuc uacauaaaug ccua 94  
  
 <210> 65  
 <211> 84  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 65  
 uaaacgggga accucucuag uagacaaucc cgugcuaaa ugauaccagc aucgucuuga 60  
 ugccauuggc agcauaaaug ccua 84  
  
 <210> 66  
 <211> 84  
 <212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic  
  
 <400> 66  
 uaaacgggga accucucuag uagacaaucc cgugcuaaa ugauaccagc aucgucuuga 60  
 ugcccuuggu ugcauaaaug ccua 84

<210> 67  
<211> 96  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<220>  
<221> misc\_feature  
<222> (17)..(66)  
<223> n is a, c, g, t or u

<400> 67  
ggaccucggc gaaagcnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60  
nnnnnngagg uuaggtgccu cgugaugucc agucgc 96